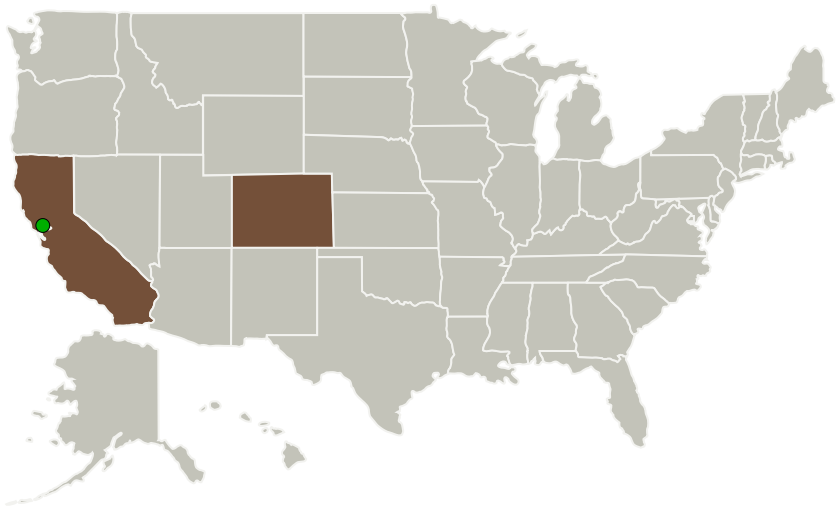
Highly Efficient Closed-Loop CO2 Removal System for Deep-Space ECLSS, Phase I

Completed Technology Project (2016 - 2017)

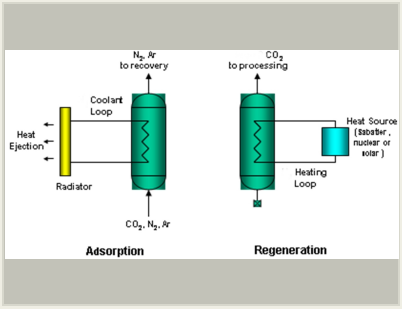
Project Introduction

TDA Research Inc.(TDA) in collaboration with University of Puerto Rico ? Mayaguez (UPRM is proposing to develop a highly efficient CO2 removal system based on UPRM proprietary strontium exchanged silico-alumino-phosphate (Sr-SAPO-34) for closed loop space craft cabin air re-vitalization during deep space missions.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
TDA Research, Inc.	Lead Organization	Industry	Wheat Ridge, Colorado
Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California
University of Puerto Rico-Mayaguez	Supporting Organization	Academia Hispanic Serving Institutions (HSI)	Mayaguez, Puerto Rico



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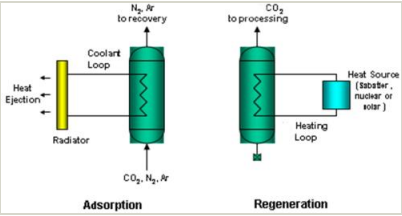
Primary U.S. Work Locations	
California	Colorado
Puerto Rico	

Images



Briefing Chart Image
Highly Efficient Closed-Loop CO2 Removal System for Deep-Space ECLSS, Phase I
(https://techport.nasa.gov/image/125994)

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Organization:
TDA Research, Inc.

Responsible Program:
Small Business Innovation Research/Small Business Tech Transfer

Project Management

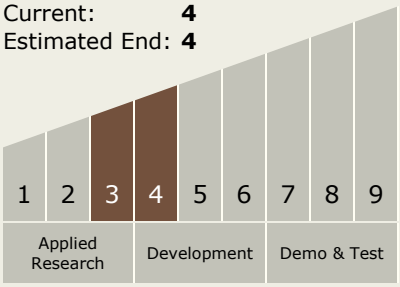
Program Director:
Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Ambalavanan Jayaraman

Technology Maturity (TRL)

Start: **3**
Current: **4**
Estimated End: **4**



Highly Efficient Closed-Loop CO2 Removal System for Deep-Space ECLSS, Phase I

Completed Technology Project (2016 - 2017)

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.1 Environmental Control & Life Support Systems (ECLSS) and Habitation Systems
    - TX06.1.1 Atmosphere Revitalization